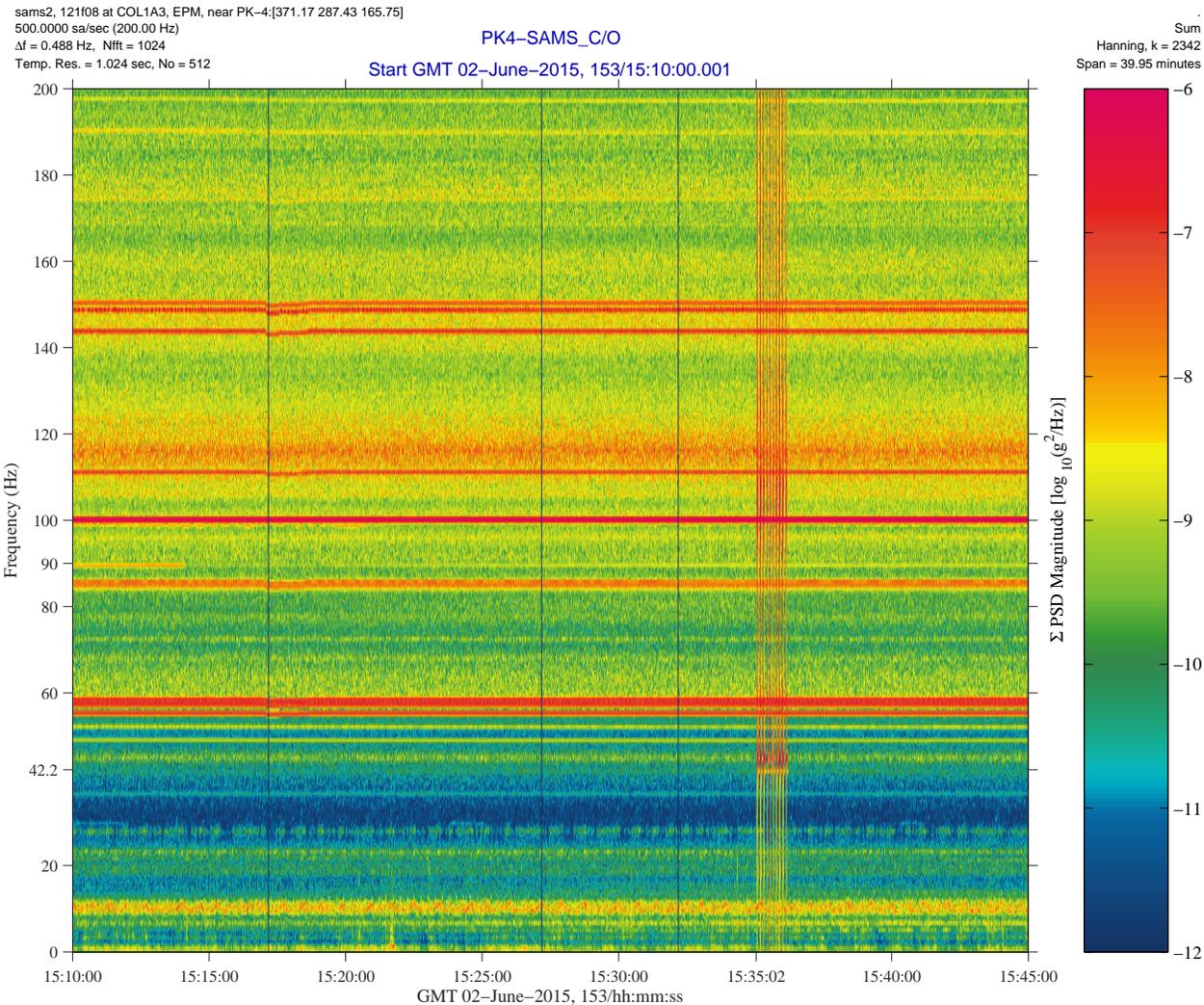


# PK-4 SAMS Checkout Qualify



## Description

Sensor	SAMS 121f08 500.0 sa/sec, 200.0 Hz
Location	COL1A3, EPM, near PK-4
Plot Type	Spectrogram

## Notes:

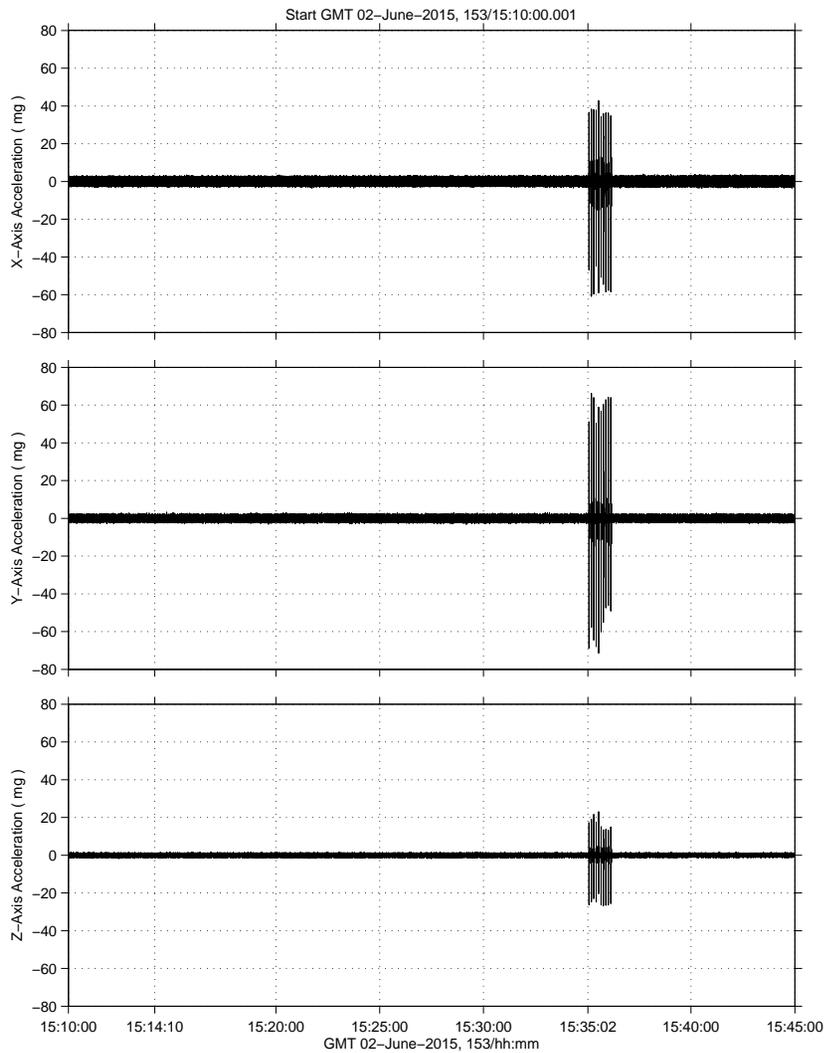
- In preparation for Plasmakristall (PK-4) experiment runs in the Columbus module on the ISS, investigators from the European Space Agency (ESA) cycled a valve in their rack-mounted equipment as a vibratory event marker for the SAMS measurements they require.
- This spectrogram shows about 35-minutes of SAMS vibratory measurements to give context around the valve-induced event marking activity, which started at about GMT 15:35.
- Note the vertical, red streaks starting at about GMT 15:35. These are indications of an impulsive/transient event in acceleration measurements when viewed via spectrogram.

Regime:	Vibratory
Category:	Equipment
Source:	PK-4 SAMS Checkout



# PK-4 SAMS Checkout Quantify

sams2, 121f08 at COL1A3, EPM, near PK-4; [371.17 287.43 165.75]  
500.0000 sa/sec (200.00 Hz) PK4-SAMS\_C/O SSAnalysis[ 0.0 0.0 0.0]



## Description

Sensor	SAMS 121f08 500.0 sa/sec, 200.0 Hz
Location	COL1A3, EPM, near PK-4
Plot Type	Acceleration vs. Time

### Notes:

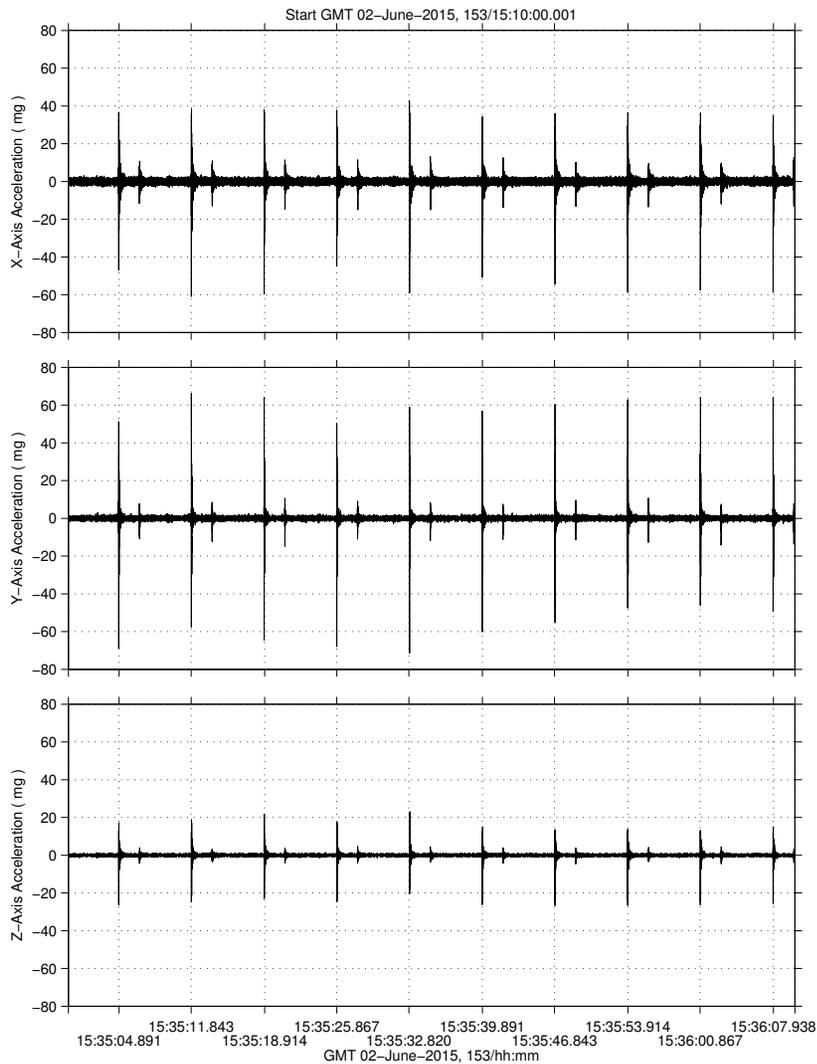
- This 3-axis plot of acceleration versus time corresponds to the same span as the spectrogram shown on the previous page.
- Most notably, see the valve-induced event markers on all 3 axes starting at about GMT 15:35.
- Furthermore, it seems that the valve actuation was aligned primarily with the Y-axis, and the XY-plane.
- Acceleration peak-to-peak magnitudes were over 120 mg on the Y-axis alone.

Regime:	Vibratory
Category:	Equipment
Source:	PK-4 SAMS Checkout



# PK-4 SAMS Checkout Quantify

sams2, 121f08 at COL1A3, EPM, near PK-4; [371.17 287.43 165.75]  
500.0000 sa/sec (200.00 Hz) PK4-SAMS\_C/O SSAnalysis[ 0.0 0.0 0.0]



## Description

Sensor	SAMS 121f08 500.0 sa/sec, 200.0 Hz
Location	COL1A3, EPM, near PK-4
Plot Type	Acceleration vs. Time

### Notes:

- This 3-axis plot of acceleration versus time is a zoom-in on the time axis from the plot on the previous page.
- Here we can clearly see ten cycles (bangs) from the PK-4-related valve to produce event markers every 7 seconds.
- Note that after each big bang from the valve, there is a much smaller vibratory impulse that follows about 2 seconds after the initial big bang. This may be to reset the valve in preparation for the next cycle.

Regime:	Vibratory
Category:	Equipment
Source:	PK-4 SAMS Checkout

